

CLAIMS

What is claimed is:

1. An accessory for reducing the kick felt by a shooter when a firearm is discharged, said accessory comprising:
- a pad, a rigid plate, and a vibration decay pattern modifier;
- said pad and said decay pattern modifier being fabricated from elastomeric material;
- said pad having therein an aperture opening onto a face of the pad;
- said plate being assembled in face-to-face relationship with that face of the pad onto which the aperture in the pad opens; and
- the decay pattern modifier having a first element integrated with the plate and a second element which is integral with the first element and is disposed in the aperture in the elastomeric pad.
2. An accessory as defined in claim 1 in which the vibration decay pattern modifier has a mushroom-like configuration defined by a stem and an integral head, said stem being fixed to said support.
3. An accessory as defined in claim 1 in which the plate is configured to complement the configuration of a specific firearm stock.

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4. An accessory as defined in claim 1 in which the plate is: (a) configured to extend beyond the perimeters of a variety of gunstocks, and (b) machinable to match the perimeter of the plate to the perimeter of a particular firearm stock.

5. An accessory as defined in claim 1 in which:

5 the plate has a stock engaging element and a side wall which extends around the periphery of said element, is oriented at right angles to the element to form a cavity in said plate;

said pad having a shoulder seated on said wall and a portion which extends into the cavity and aligns the pad with the plate.

10 6. The combination of:

an accessory as defined in claim 1;

a firearm which has a stock; and

15 fasteners for: (a) maintaining the elastomeric pad and the plate of the accessory in assembled relationship, and (b) mounting the accessory to the stock of a firearm.

7. An accessory as defined in claim 1 which includes a component for mounting the accessory to the stock of a firearm.

8. An accessory as defined in claim 7 in which the accessory mounting component is a threaded fastener.

9. An accessory as defined in claim 8:

which includes a rigid mounting plate;

said mounting plate being embedded in said pad and providing a mechanism for supporting the threaded fastener.

5 10. An accessory as defined in claim 7 in which the accessory mounting component is a sleeve adapted to receive butt of a gunstock, said sleeve being an integral part of the accessory.

10 11. An accessory as defined in claim 1 wherein the pad aperture in which the second element of the vibration decay pattern modifier is disposed is so sealed that said pad provides pneumatic cushioning when the firearm is discharged.

12. An accessory as defined in claim 1 in which there is a clearance around the periphery of the second decay pattern modifiers second element between that periphery and the boundary of the aperture in which said element is disposed.

15 13. An accessory as defined in claim 1 in which the decay pattern modifier, the elastomeric pad, or the decay pattern modifier and the elastomeric pad are fabricated from a material which comprises a chloroprene polymer.

14. An accessory as defined in claim 13 in which said material has a Durometer hardness in the range of 12 to 30.

15. An accessory as defined in claim 1 in which the elastomeric pad has the capability of elastically compressing to reduce the kick felt by the shooter when the firearm is discharged.

5 16. An accessory as defined in claim 15 in which there are cavities in the elastomeric pad which reduce the thickness of the pad material and thereby contribute to the compressibility of the pad.

17. An accessory as defined in claim 1 wherein the material from which the elastomeric pad is fabricated has properties which make the pad capable of modifying the decay pattern of vibrations set up in said pad.

10 18. An accessory for reducing the kick experienced by the shooter when a firearm is discharged:

said accessory comprising a plate and a resiliently compressible pad;

said pad having a cavity opening to one face of the pad; and

15 said plate being so disposed in face-to-face relationship with the pad as to form a sealed pocket that can collapse to elastically compress air filling the pocket when the firearm is discharged, thus pneumatically cushioning the kick felt by the shooter.

19. An accessory as defined in claim 17 which has a vibration decay modifier integrated with said plate and disposed in the aperture in the pad.

20 20. An accessory as defined in claim 18 in which:

said plate has a base and a wall extending around the periphery of the base and oriented at right angles to said base; and

said base and said plate are so sealed together around said periphery as to confine air to the cavity in the base and thereby impart said pneumatic cushioning function to the accessory.

21. An accessory as defined in claim 17 in which said cavity is so dimensioned as to reduce the thickness of accessory material and thereby increase the cushioning afforded by said pad when the firearm is discharged.

22. An accessory as defined in claim ¹⁷20 in which there is an additional cavity in said pad for also reducing the thickness of elastomeric pad material and thereby further contributing to the cushioning afforded by the accessory when the firearm is discharged.

23. An accessory as defined in claim 21 in which said additional cavity extends completely through said pad and accommodates a fastener designed to secure the accessory to the gunstock.

24. An accessory as defined in claim 17:

which comprises a vibration decay pattern modifier

said modifier having a mushroom-like configuration defined by a stem and an integral head;

said stem being fixed to said plate; and

said head being disposed in the cavity in the resiliently compressible pad.

25. An accessory as defined in claim 23 in which there is a clearance around the periphery of the decay pattern modifier head between that periphery and the boundary of the compressible pad aperture in which said element is disposed.

5 26. An accessory as defined in claim 17 in which the decay pattern modifier, the compressible pad, or the decay pattern modifier and the compressible pad are fabricated from a material which comprises a chloroprene polymer.

27. An accessory as defined in claim 17 in which said material has a Durometer hardness in the range of 12 to 30.

10 28. An accessory for reducing the kick felt by the shooter when a firearm is discharged, said accessory comprising:

a generally rigid plate; and

an elastomeric pad fixed in face-to-face relationship to said plate.

29. An accessory as defined in claim 28:

15 which comprises a component for modifying the decay pattern of vibrations set up in the accessory when the firearm is discharged;

said decay pattern modifying component having a head and an integral stem;

said stem being attached to said plate;

there being a cavity in said elastomeric pad; and

the head of the decay pattern modifying component being disposed in said cavity.

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30. An accessory as defined in claim 22 in which said elastomeric pad, or said decay pattern modifying component, or said pad and said component are fabricated from a material which comprises a chloroprene polymer.

31. An accessory as defined in claim 23 in which the material has a Durometer hardness in the range of 12 to 30.

10 32. An accessory as defined in claim 28 in which the elastomeric pad is hollowed out to increase the kick reducing effect offered by said pad.

33. An accessory as defined in claim 32 which:

comprises a component for modifying the decay pattern of the vibrations set up in the gun when said gun is discharged;

15 said component being disposed in a cavity in said elastomeric pad; and said cavity being one of the features which hollow out said pad.

34. An accessory as defined in claim 33 which:

Includes an additional cavity in said pad which contributes to the hollowing out of the pad;

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there being a fastener for attaching the accessory to the butt end of a
gunstock and accessory aperture through which the fastener extends; and

there being a cavity in line between segments of the accessory aperture
which contributes to the hollowing out of the elastomeric pad.

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